Reveo-0091USAACN01

In the Abstract:

Please delete the existing abstract and replace with the following:

-- A solid state optical interconnect system selectively interconnects a plurality of electromagnetic signals between a plurality of inputs and a plurality of outputs. The system includes a plurality of solid state, selectively actuatable 2x2 optical switching elements; and a plurality of all-optical signal paths extending through said 2x2 optical switching elements between the inputs and outputs. Each of said plurality of all-optical signal paths has substantially the same pathlength. This switch element is relatively robust and insensitive to environmental disturbances and has a reconfiguration time which is an order of magnitude faster than conventional opto-mechanical switches which generally require tens of milliseconds before reconfiguration. The switch element provides constant data pathlength for constant latency, loss, and unskewed data output. The element also advantageously provides for convenient scaling to a non-blocking N×N configuration using N* ($\log_2$ N-1) 2×2 switches rather than conventional approaches which require N($\log_2$ N) switches, for a relatively simple and compact configuration.--